

REMARKS

The last Office Action has been carefully considered.

It is noted that claims 1-7 and 16 are rejected under 35 U.S.C. 103(a) over the German patent document 4431865 in view of the patent to Jom, Blum, Muller or Japanese patent document.

Also, the claims are rejected under 35 U.S.C. 112 and corrected formal drawings are required.

With the present communication applicants have submitted corrected formal drawings and amended the claims as required by the Examiner.

It is respectfully submitted that the new features of the present invention which are now defined in the claims clearly and patentably distinguish the present invention from the prior art applied by the Examiner.

Turning now to the references and particular to the patent to Blum, it can be seen that this reference discloses a method which is

incapable of providing a continuous separation of the protective gas atmosphere from the ambient air. By the forced reaction of the melt with the oxygen with the ambient air, the method disclosed in this reference for a mass production will lead to the melt which will be non usable. Also, the method disclosed in this reference presumes that the quantity of the gas material can be dosed accurately. In a practical use under conditions of a mass production the utilization of a multiple material quantities is required, to avoid air inclusions. In contrast to the method disclosed in this reference, the inventive method provides a separating location, which makes possible periodically repeated additions without residues.

For obtaining the system which is closed from outside, in the inventive method the introduction of the liquid light metal into the dosing chamber, the further heating of the light metal inside the dosing chamber and the pressing of the liquid light metal in the mold nest of the casting mold is performed without pressure equalization outside. The protective gas is supplied and withdrawn through a differential pressure system. The selective post-dosing of the solid light metal in addition to the supply of liquid light metal is performed through a sluice device for maintaining the available differential pressure between the outer atmosphere and the inner pressure

of the dosing chamber. An eventually occurring pressure loss is compensated by a protective gas post-dosing.

The U.S. patent to Jörn also deals with an outwardly open system, which operates with the method of gravity casting with the use of sand molds. Overpressure atmospheres can not be produced and light metals such as magnesium or magnesium alloys are not brought into metal forms. This system is not comparable with the method of the present invention.

The patent to Blum as well as the patent to Muller deal exclusively with inductive heating which must provide a symmetric cast jet. For this purpose induction coil devices which are asymmetrical but are simple for manufacture are utilized. For producing a symmetrical (similar) cast jet, palisade-shaped outer parts for compensating this asymmetry are arranged on the retort in the patent to Blum. A use of these devices for light metals such as magnesium or magnesium alloy is functionally not possible due to magnetic properties.

Japanese patent document 63-268,559 does not disclose a manufacturing process, but instead discloses a controllable valve

arrangement which can be used for a mass production of pressure cast parts. In this arrangement, in addition no temperature drop of the melt or separation of the dosed material is provided.

It is therefore believed to be clear that none of the references applied by the Examiner against the claims taken singly teach the new features of the present invention as defined in the current claims. As for the combination of the references, applicant wishes to make the following remarks.

The Examiners attention is respectfully directed to the decision in re Fritch, 23 USPQ 2d 1780, 1783-84 (Fed. Cir. 1992) in which it was stated:

"Obviousness can not be established by combining the teachings of the prior art to produce the claimed invention, absence some teaching or suggestion supporting the combination. Under section 103 teachings of the references can be combined only if their some suggestion or incentive to do so".

Definitely, the references do not contain any hint or suggestion for such modifications.

Also, the references taken singly or even in combination do not teach the new features of the present invention as defined in the claims.

Therefore, in order to arrive at the applicant's invention from the references, the references have to be fundamentally modified. However, it is known that in order to arrive at a claimed invention, by modifying the references the cited art must itself contain a suggestion for such a modification.

This principle has also been consistently upheld by the U.S. Court of Customs and Patent Appeals which, for example, held in its decision in *re Randol and Redford* (165 USPQ 586) that

Prior patents are references only for what they clearly disclose or suggestion; it is not a proper use of a patent as a reference to modify its structure to one which prior art references do not suggest.

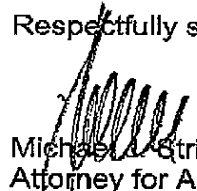
Definitely, the references do not provide any hint or suggestion for modifications which would lead to the applicant's invention.

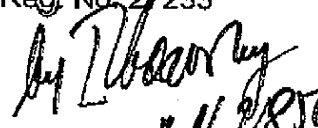
Reconsideration and allowance of the present application is most respectfully requested.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place this case in condition for final allowance,

then it is respectfully requested that such amendments or corrections be carried out by Examiner's Amendment, and the case be passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, he is invited to telephone the undersigned (at 631-549-4700).

Respectfully submitted,

  
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